INCOME PARITY FOR AGRICULTURE

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A brief discussion of (a) price or income as a standard for agricultural recovery (b) a measure of income parity and (c) the ratio of the purchasing power of net income per person on farms and the purchasing power of income per person not on farms.

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In the "Soil Conservation and Domestic Allotment Act" approved by Congress on February 27, 1936, Congress recognized the existence of a disparity between the income per person on farms and the income per person not on farms, just as in the Agricultural Adjustment Act, it recognized the existence of a disparity between prices received by farmers for the things they sold and prices paid by them for the things they bought. This recognition is contained in the following declaration of policy:

> Sec. 7. (A) It is hereby declared to be the policy of this act also to secure and the purposes of this act shall also include, (1) preservation and improvement of soil fertility; (2) promotion of the economic use and conservation of land; (3) diminution of exploitation and wasteful and unscientific use of national soil resources; (4) the protection of rivers and harbors against the results of soil erosion in aid of maintaining the navigability of waters and water courses and in aid of flood control; and (5) re-establishment, at as rapid a rate as the Secretary of Agriculture determines to be practicable and in the general public interest, of the ratio between the purchasing power of the net income per person on farms and that of the income per person not on farms that prevailed during the five-year period August 1909-July 1914, inclusive, as determined from statistics available in the United States Department of Agriculture, and the maintenance of such ratio.

the Act provides for an annual appropriation not exceeding $500,000,000 for any fiscal year, which the Secretary of Agriculture is to use to promote the income and other objectives of the Act.

The following pages deal with such facts as are now available for determining "the ratio between the purchasing power of the net income per person on farms and that of the income per person not on

farms that prevailed during the five prewar years." These facts indicate the extent of the income disparity and what part of it would be reduced by the expenditure of the $500,000,000. There is first presented a brief contrast between the parity price standard contained in the Agricultural Adjustment Act of 1933 and income standards. The second part of this statement is a reproduction of an article which appeared in the February 1936 issue of The Agricultural Situation in which there is demonstrated a method of computing the ratio between the purchasing power of net income per person on farms and that of the income per person not on farms.1/ Other methods may be developed by the Department of Agriculture as additional information on income and living costs become available or as more satisfactory definitions of net income per person on farms and income per person not on farms are developed. The ratio as computed here indicates a disparity between farm and other income in 1935 of about $1,100,000,000 exclusive of benefit payments which for the 1935 production were scheduled at $480,000,000. Thus the $500,000,000 appropriation provided for in the Soil Conservation and Domestic Allotment Act represents approximately the annual benefit payments made under the Agricultural Adjustment Act and something less than half of the disparity that exists at present between the purchasing power of persons on farms and persons not on farms. This appropriation also places a definite limit to the power given the Secretary of Agriculture to reestablish the prewar ratio of income parity.

I. Price or Income as a Standard for Agricultural Recovery.

It is not generally recognized that the price parity standard for agricultural recovery, embodied in the Agricultural Adjustment Act, was adopted because of practical as well as economic considerations. An income standard would have been economically preferable, of course, but anyone at all acquainted with the problems of defining and measuring income, particularly with the lack of adequate data, realizes at once that in both agricultural and industrial measures of income, we are far from having any practical bases for measuring incomes of various groups. Any available measure of income calls for qualifications, limitations, arbitrary assumptions and judgments, so that no two investigators are likely to come to the same conclusions. For legislative purposes, involving the taxing power, it was necessary to write into the Act a standard that was clear, precise and subject to no administrative judgment. That was one reason for adopting as the parity standard the well known and official index of prices paid by farmers. It was a recognized measure of unit costs in agriculture, currently computed and published by the U. S. Department of Agriculture, and was subject to no other influence than that of the prices currently reported to the Department by thousands of crop and price correspondents.

Aside from the fact that income concepts in 1932-33 were not sufficiently precise, and available data by regions, commodities or groups were not adequate, there was a broad economic reason for adopting price parity as an emergency standard for agricultural recovery;

1/Part II of this statement appears in the Agr. Situation Feb. 1936, United States Department of Agriculture, beginning on page 6.

by and large, agricultural production tends to remain fairly stable, variations among regions and crops tending to offset each other, with the result that major changes in gross income for agriculture as a whole are determined very largely by price changes. For example, between 1914 and 1919 there was practically no change in the total volume of agricultural output, but prices and, therefore, gross income more than doubled. Similarly, during the period 1929-1932 total output remained practically unchanged, but prices and, therefore, gross income fell about 60 percent.

Consequently, the attempt to raise the agricultural price level toward the level indicated by prices that farmers paid for their purchases, was a recognition of the fact that national farm income is largely a matter of price. For regions and for commodities, of course, income is also determined largely by output, sales and costs, but no differentiation among the prices of cost items could have been made by regions or commodities in 1933; as a matter of fact, none can be made now, since no such retail price indexes are available.

The shortcomings of the parity price standard, with pre-war relationships taken as the base of comparison, were recognized in the Act itself. The use of a post-war parity base period for tobacco was in part a recognition of the great changes that had taken place in production costs and in demand for the several varieties of tobacco. The fact that the Secretary of Agriculture was called upon to recognize the level of consumer purchasing power in determining the amount of the processing tax was further recognition that the parity price standard could not be applied indiscriminately and without regard to certain economic conditions. Parity prices were to be sought only in cases and situations in which they did not curtail domestic consumption.

The shortcomings of the parity price standard were also recognized from time to time by the Secretary of Agriculture and other members of the U. S. Department of Agriculture. Thus in November 1934, Secretary Wallace differentiated between prices and income as a standard of agricultural well being and emphasized the problems of determining what constitutes a fair share of the national income for agriculture when he said: "Farmers will have a fair share of the national income when their share is sufficient (1) to maintain a flow of production in balance with the needs of a maximum consumption, (2) to provide for decent human living; and (3) to achieve these ends without impoverishing the soil."

Contrasts among (1) the parity price measure of agricultural welfare, (2) the purchasing power of income from farm production after deducting certain expenses, and (3) the per capita share of the national income, were presented by the writer in the Agricultural Situation of February 1935. These contrasts perforce dealt with agriculture as a whole. Subsequently, an effort was made to present these contrasts for a region and a major commodity, namely cotton. For this purpose, there was available a larger body of cost data for cotton than for other commodities. The results were published by the Program Planning Division of the Agricultural Adjustment Administration in a mimeographed bulletin entitled "Facts Relating to Cotton Prices, Purchasing Power, Out-of-Pocket Costs", August 1935.

A further exploratory study on the subject of parity income, published in the February 1936 issue of the Agricultural Situation, is reproduced in the following pages. This study, like the others, is on a national basis. It does not attempt to discuss theoretically the various possible definitions of parity income. It presents directly two sets of data. One makes possible the computation of the income (exclusive of certain production expenses) per person living on a farm, and its relative purchasing power for goods used in the farm home and entering the farmer's standard of living. The other set of data deals with the total national income as currently paid out to all persons not on farms.

This, on a per capita basis and expressed in terms of its exchange value for the goods and services that enter the average urban standard of living, is suggested as a measure of "income parity." In a broad sense, it indicates the economic progress made by the non-farm population as a whole and is the measure of progress the farm population might be expected to make if they are to keep pace with the non-farm population. No discussion is here presented as to (1) whether other bases for computing income per person in either agriculture or industry should be used, (2) whether the available data used are really adequate, or (3) whether the income parity related to the prewar years is too high or too low a standard for agriculture.

Prices received by farmers during the calendar year 1935 averaged 86 percent of prewar parity, or probably about 91 percent if benefit payments are included as an addition to price. This may be compared with 61 percent in 1932. Gross income per capita (derived from livestock sold during the calendar year and crops sold during the crop year) after deducting production expenses and after adjusting for changes in living costs in the farm home, amounted to 82 percent of prewar income parity and to about 90 percent including benefit payments. This may be compared with 66 percent in 1932. While the 1935 results are about the same according to either the price or the income standard, the comparison for earlier years is not so close, as shown by the following tabulation:

	Farm Prices as Percentage of Parity Prices	Farm Income as Percentage of Parity Income (excl. benefit payments)
1910-14......	100	100
1917-19......	112	128
1920-23......	92	85
1924-29......	95	91
1932.........	61	66
1933.........	64	81
1934.........	73	73
1935.........	86	82

Farm income expressed as percentage of parity income advanced more during the war years and declined more during the post war depression than did farm prices as percentage of parity prices, both being compared with their pre-war levels. The income measure advanced more sharply in 1933 than did prices expressed as percentage of parity prices. For 1934

it showed a decline due to the fact that urban income lagged in recovery, that is, followed the advance which took place in agriculture during 1933. Both advanced in 1935, but relative prices advanced more than relative income.

Were the 1935 income to be made to equal prewar parity income, it would have to be raised by about $1,150,000,000 instead of the $480,000,000 in benefit payments scheduled to be made on 1935 farm production.

II. Income Parity for Agriculture.

In the Agricultural Situation of February 1935 we presented certain data contrasting three measures of agricultural well-being in the aggregate. One of these measures was parity prices with the prewar price relationships as the starting point. The second was the per-capita purchasing power of net income from agricultural production (exclusive of such additional income as farmers may have from other sources). The third was the farmer's per capita share of the national income. For 1934, largely by coincidence, each of these measures indicated roughly that the economic welfare of agriculture as a whole was about 20 percent below that which prevailed in the five years before the World War.

The basic criticism of the "price-parity" measure of the agricultural situation is that it does not take into account the changing volume of production, sales, costs of production, and the number of persons on farms.

The basic criticism (aside from the question of the adequacy of the data) of the "purchasing-power-of-net-income" measure is that it indicates the progress that agriculture makes from year to year in terms of its own standard of living and not in terms of the rate of progress of the rest of the country. Thus, during the period 1922-1929, agriculture as a whole apparently had a per capita purchasing power equal to that of the prewar years, but the standard of living of the rest of the country had advanced about 25 percent above that level; so that the agricultural depression of those years was largely a relative matter, in the sense that agriculture failed to keep pace with industrial progress.

The third measure of the agricultural situation, "the per-capita share of the national income", partly meets this requirement of relative rates of progress but may be criticized on the ground that it does not take into account the differences in living costs on the farm and in cities. In other words, the comparable per capita incomes of agriculture and the total population should be made to show the amount of goods and services that each could get in exchange.

We present below a modification of that third measure. It may be defined rather cumbrously as the ratio of purchasing power (or exchange value) of net farm income per person on farms to the per capita purchasing power of the income of the rest of the population. The relative per capita purchasing power per person not on farms we may consider as the measure of income parity for agriculture, just as the index of prices

paid by farmers has been used as a measure of price-parity. And the ratio of agricultural per capita purchasing power to this income parity standard may be used as a measure of the progress agriculture makes from season to season in keeping pace with the living standards of the rest of the population.

The data used in the following tables and charts are essentially the same as those used in the article on Increasing the Farmers' Share of the National Income in the February 1935 issued of the Agricultural Situation. There have been no recent changes in the method of estimating farm income from production, no new comprehensive knowledge as to farm income from sources other than production, and no essentially new basic data on the long-time changes in the income of persons not on farms. Even though they are subject to qualifications and may have to be partly modified when better data are available, the present available data are useful in obtaining a first broad approximation as to the level of "income parity", the present agricultural income "disparity", and what additional farm income is required to promote a progressive balance between agricultural and urban living standards.

For 1935, the $8,110,000,000 of gross income (shown in Table 1) becomes $7,630,000,000 if we exclude benefit payments; this becomes $5,214,000,000 after deducting $2,416,000,000 for selected production expenditures (including taxes and interest, but not wages to hired labor); and this "net income" is equal to $159 for each of the 32,779,000 persons estimated as living on farms in 1935. This money income per person available for farm-home living costs is 94 percent of the income per person available in the prewar years, and with farm living costs at 124 percent of the 1910-14 level, it has a command over goods equal to 76 percent of its exchange value in 1910-1914. Benefit payments paid or to be paid raise that relative purchasing power to 83 percent (See Chart 1, and upper half of Chart 3) *

In order to bring the 1935 total net farm income to a level that would have restored the farmers' prewar purchasing power, the $5,214,000,000 would have had to be raised by about 32 percent (76 to 100) or nearly $1,670,000,000. Benefit payments to be paid on the 1935 production were scheduled at $480,000,000.

For 1935 the total national income paid out almost wholly to individuals not on farms is estimated to have been $49,800,000,000 (see Table 2). Distributed over a non-farm population of 94,012,000 this total income becomes $530 per capita or 132.4 percent of the prewar income per capita. Living costs in typical cities averaged 142.5 percent of the prewar costs, giving the $530 income a purchasing power of 92.9 percent of the prewar average. (See Chart II, and upper half of chart 3).*

This relative purchasing power per person not on farms may be taken as a measure of income parity for agriculture. We may now contrast this measure with the similar figures for the average person living on farms (which was 76% in 1935 without benefit payments or 83 percent with benefit payments) and by dividing one by the other, obtain a single measure of the progress of the average person on farms in terms of "income parity." The annual changes in the relative purchasing power of each of these two broad

TABLE 1 - FARM INCOME AND PURCHASING POWER

	Gross Income	Selected Expenditures(1)	Net Farm Income	Farm Population (2)	Net Income per capita: Amount	Net Income per capita: 1910-14=100	Index of prices paid by farmers for family maintenance 1910-14=100	Purchasing Power of Net Income(3) 1910-14=100
	(Million Dollars)			(000)	Dollars			
1910	6,643	1,171	5,472	32,077	171	101.3	98	103.4
1911	6,372	1,289	5,083	32,110	158	93.6	100	93.6
1912	6,784	1,286	5,498	32,120	171	101.3	101	100.3
1913	6,975	1,461	5,514	32,120	172	101.9	100	101.9
1914	7,028	1,516	5,512	32,100	172	101.9	102	99.9
1915	7,395	1,609	5,786	32,050	181	107.2	107	100.2
1916	8,914	1,966	6,948	31,990	217	128.6	124	103.7
1917	12,832	2,520	10,312	31.930	323	191.4	147	130.2
1918	15,101	2,966	12,135	31.820	381	225.7	177	127.5
1919	16,935	3,424	13,511	31.730	426	252.4	210	120.2
1920	13,566	3,734	9,832	31.614	311	184.2	222	83.0
1921	8,927	3,041	5,886	31.703	186	110.2	161	88.4
1922	9,944	3,035	6,909	31.768	217	128.6	156	82.4
1923	11,041	3,182	7,859	31,290	251	148.7	160	92.9
1924	11,337	3,105	8,232	31,056	265	157.0	159	98.7
1925	11,968	3,408	8,560	31,064	276	163.5	164	99.7
1926	11,480	3,451	8,029	30,784	261	154.6	162	95.4
1927	11,616	3,426	8,190	30,281	270	160.0	159	100.6
1928	11,741	3,709	8,032	30,275	265	157.0	160	98.1
1929	11,941	3,893	8,048	30,257	266	157.6	158	99.7
1930	9,454	3,379	6,075	30,169	201	119.1	148	80.5
1931	6,968	2,615	4,353	30,585	142	84.1	126	66.7
1932	5,337	2,158	3,179	31,241	102	60.4	108	55.9
1933	6,406	2,131	4,275	32,242	133	78.8	109	72.3
1934	7,265	2,239	5,026	32,509	155	91.8	122	75.2
1935	8,110	2,416	5,694	32,779	174	103.1	124	83.1
Excluding Benefits:								
1933	6,128		3,997		124	73.5		67.4
1934	6,671		4,432		136	80.6		66.1
1935	7,630		5,214		159	94.2		76.0

(1) As estimated by the Bureau of Agricultural Economics except all taxes included and wages excluded.

(2) January 1st estimates, based on census in census years; after 1920, Bureau of Agricultural Economics estimates; between 1910-1920, A.A.A. estimates.

(3) Column (6) divided by Column (7).

TABLE 2- NON-FARM INCOME AND PURCHASING POWER

191	National Income excluding agriculture (1) (Mil.Dol.)	Non-Farm Population (2) (000)	Income Per Capita(3) Amount Dollars	Income Per Capita(3) 1910-14=100	Urban Cost of Living (4) 1910-14=100	Purchasing Power per capita (5) 1910-14=100
1910	22,806	59,402	384	95.9	96.9	99.0
1911	23,561	60,865	387	96.7	96.9	99.8
1912	25,064	62,269	403	100.6	102.9	97.8
1913	26,776	63,685	420	104.9	100.9	104.0
1914	26,588	65,120	408	101.9	102.3	99.6
1915	27,595	66,586	414	103.4	104.4	99.0
1916	32,253	68,060	474	118.4	111.7	106.0
1917	37,387	69,536	538	134.4	128.7	104.4
1918	43,579	71,060	613	153.1	154.0	99.4
1919	47,368	72,566	653	163.1	177.0	92.1
1920	54,871	74,097	741	185.1	206.4	89.7
1921	48,463	75,672	650	159.8	181.2	88.2
1922	50,626	77,272	655	163.6	171.0	97.7
1923	57,923	79,415	729	182.1	173.8	104.8
1924	60,136	81.314	740	184.8	174.5	105.9
1925	63,978	82,971	771	192.6	178.8	107.7
1926	66,740	84,916	786	196.3	180.3	108.9
1927	67,636	87,083	777	194.1	177.5	109.4
1928	69,182	88,754	779	195.6	175.2	111.6
1929	71,448	90,437	790	197.3	175.2	112.6
1930	66,570	92,190	722	180.3	170.8	105.6
1931	56,131	93,045	603	150.6	156.1	96.5
1932	44,318	93,270	475	118.6	140.3	84.5
1933	41,473	92,955	446	111.4	133.5	83.4
1934	46,890	93,619	501	125.1	138.2	90.5
1935	49,800	94,012	530	132.4	142.5	92.9

(1) Series published in "Agricultural Situation" (February, 1935).

(2) Total population as estimated by Bureau of Census minus farm population; farm population estimated by A.A.A. between 1910-20 and by Bureau of Agricultural Economics after 1920.

(3) Column 1 divided by column 2.

(4) Bureau of Labor Statistics.

(5) Column 3 divided by Column 4.

Table 3

Ratio of Per Capita Purchasing Power of Farm Income to Per Capita Purchasing Power of Non-Farm Income 1/

(1910-14=100)

Year	Percent	Year	Percent
1910	104	1925	93
1911	94	1926	88
1912	103	1927	92
1913	98	1928	88
1914	100	1929	89
1915	101	1930	76
1916	98	1931	69
1917	125	1932	66
1918	128	1933	89
1919	131	1934	83
1920	93	1935	90
1921	78	Excluding Benefit Payments;	
1922	84	1933	81
1923	87	1934	73
1924	93	1935	82

1/ Column 7 of Table 1 divided by Column 5 of Table 2.

groups of the total population are shown in Chart III.* Between 1910 and 1916 the purchasing power of agricultural and of non-farm population remained approximately in balance, deviating only slightly from the average of that period.

The wartime rise in prices of basic commodities gave farmers a sharp rise in purchasing power which was maintained for three years, 1917, 1918 and 1919. During that period the urban population in total failed to maintain the improvement shown for 1916.

Practically all of the farmers' three-year grain was wiped out during the 1920-1923 seasons and during the years 1924-1929 agricultural per capita purchasing power remained a few percent below the prewar agricultural level. During that same period the non-farm population, after recovering from the 1921-1922 depression, experienced a steady advance in purchasing power and living standards up to 1929, when their incomes gave them a purchasing power of about 13 percent greater than in the prewar years.

By 1932 the per capita agricultural purchasing power fell to 56 percent of its prewar level and the non-farm purchasing power fell to 84 percent. In 1935 the latter had risen to 93 percent and the agricultural figure to 76 percent, or to 83 percent with benefit payments.

These two measures of relative purchasing power may now be converted into a single series to represent the progress made by agriculture from season to season in relation to the progress of the rest of the country. This single measure is obtained by dividing the index of relative agricultural purchasing power per capita by the relative non-farm purchasing power per capita. The result is shown in the lower half of Chart III.

The temporary sharp advance in the position of agriculture in 1917-1919 stands out as in the preceding illustration. The failure of farm income to keep pace with the rise in national income after 1924 shows up as a decline in the ratio from 93 in 1924 to 89 in 1929; the sharper agricultural decline during the depression shows as the ratio falls to 66 in 1932 and the improvement since then is revealed by a restoration of that ratio to 82 without benefit payments or to 90 with benefit payments.

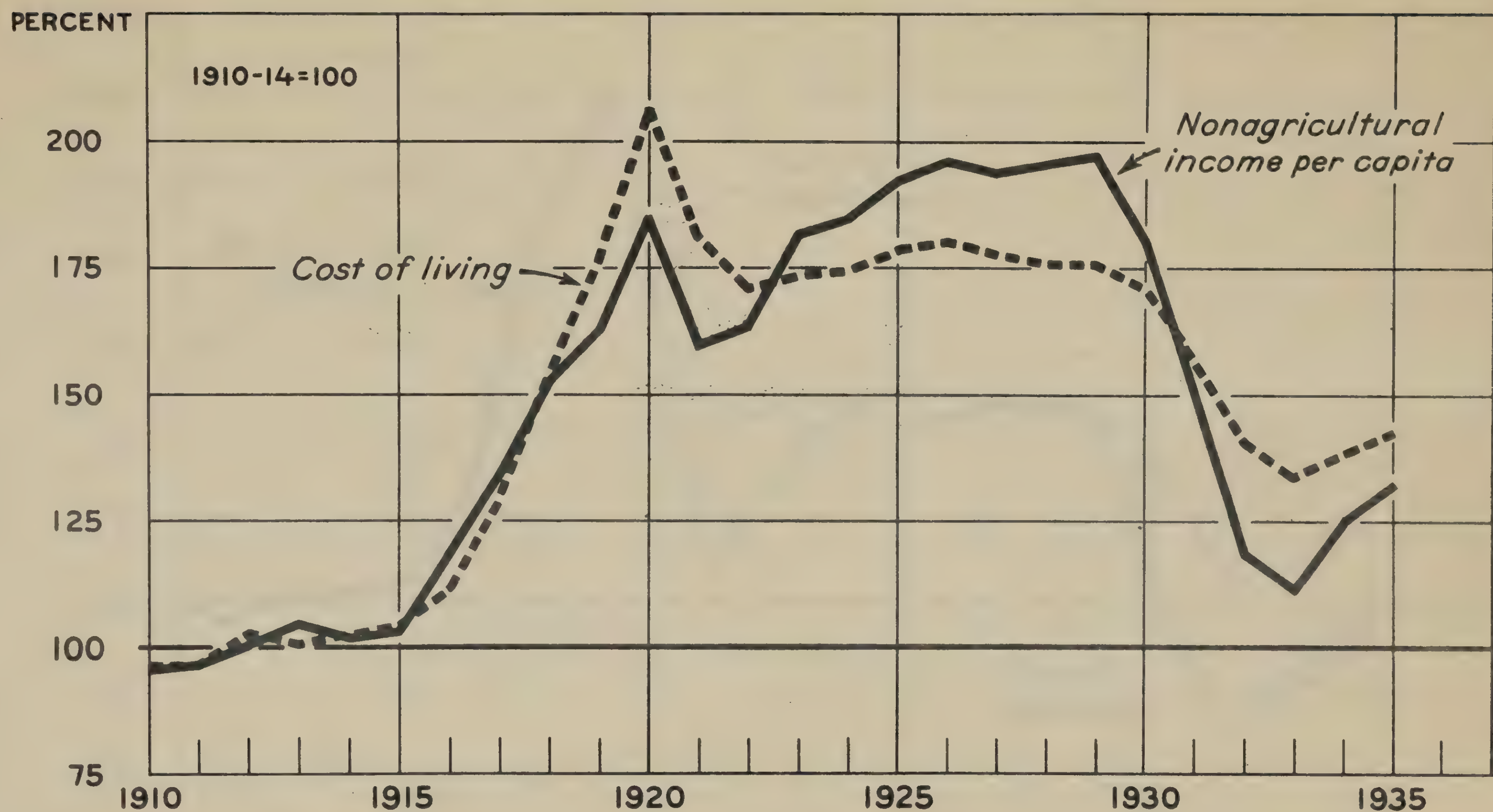
To have restored the relative purchasing power of the farm population in 1935 to that of the non-farm population would have called for an increase of about 22 percent (from a ratio of 82 to 100) in the 1935 net income of $5,214,000,000 or about $1,150,000,000. The benefit payments amounted to $480,000,000.

It may be pointed out that the agricultural gains in relation to the gains of the rest of the population in the 3 years, 1917-19, were about completely offset by the relative losses and failure to keep pace with industrial progress during the 7 years, 1920-26.

This suggests that some time in the future the relative losses sustained by agriculture during the years 1927-35 should be offset by

gains over a prolonged period. These relative losses aggregate about 160 percent, which in terms of the pre-war net income of $5,400,000,000 would mean about $8,500,000,000. Agricultural purchasing power would thus have to exceed non-farm purchasing power by about 20 percent for a period of about 8 years to make up for the relative losses of 1927--35.

NATIONAL INCOME (EXCLUDING AGRICULTURAL) PER CAPITA AND COST OF LIVING, 1910-35



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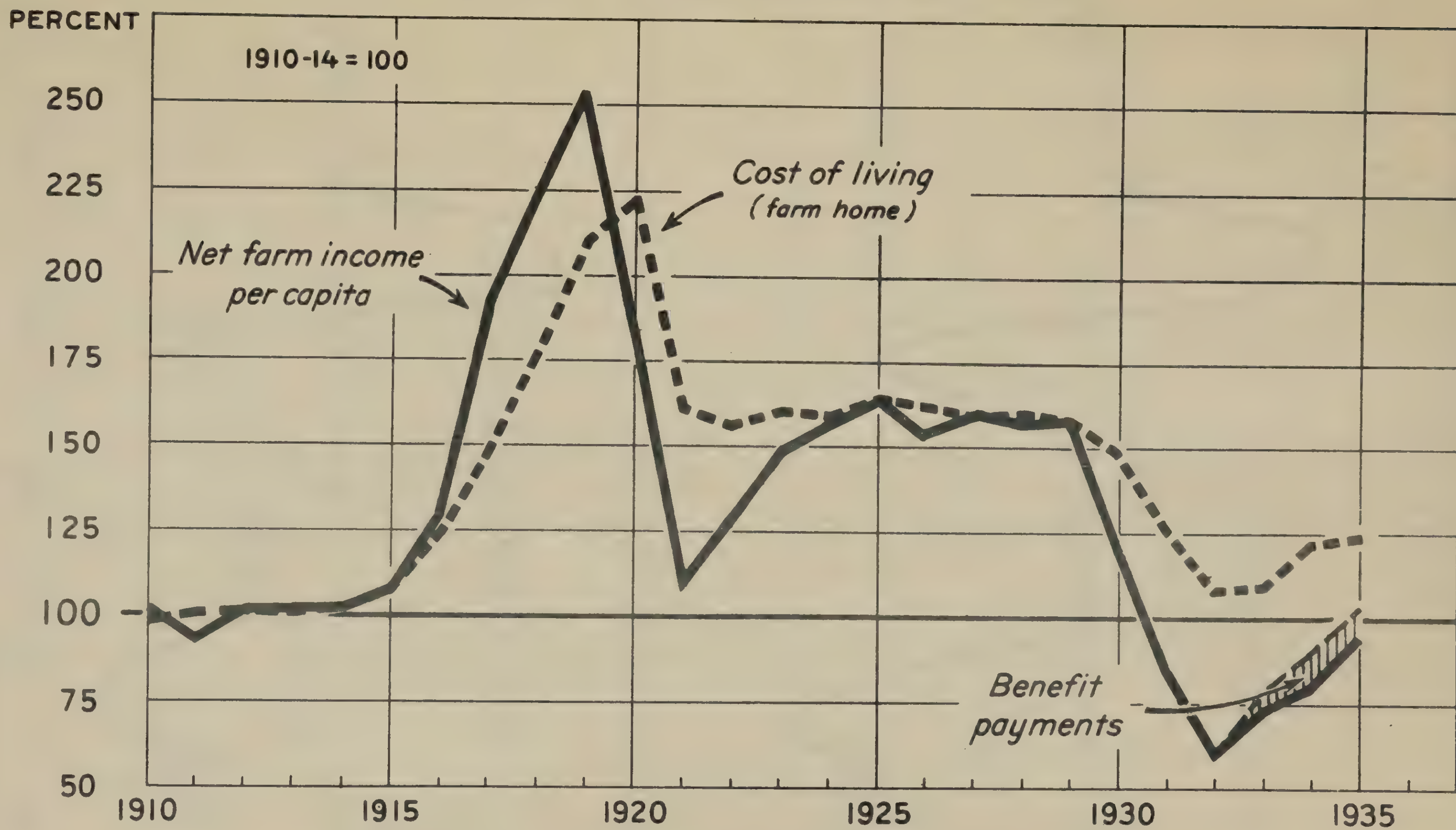
FARM INCOME (LESS SELECTED EXPENDITURES*) PER CAPITA AND FARM LIVING COSTS, 1910-35



* EXPENDITURES INCLUDE PRODUCTION EXPENSES PLUS TAXES, AND INTEREST

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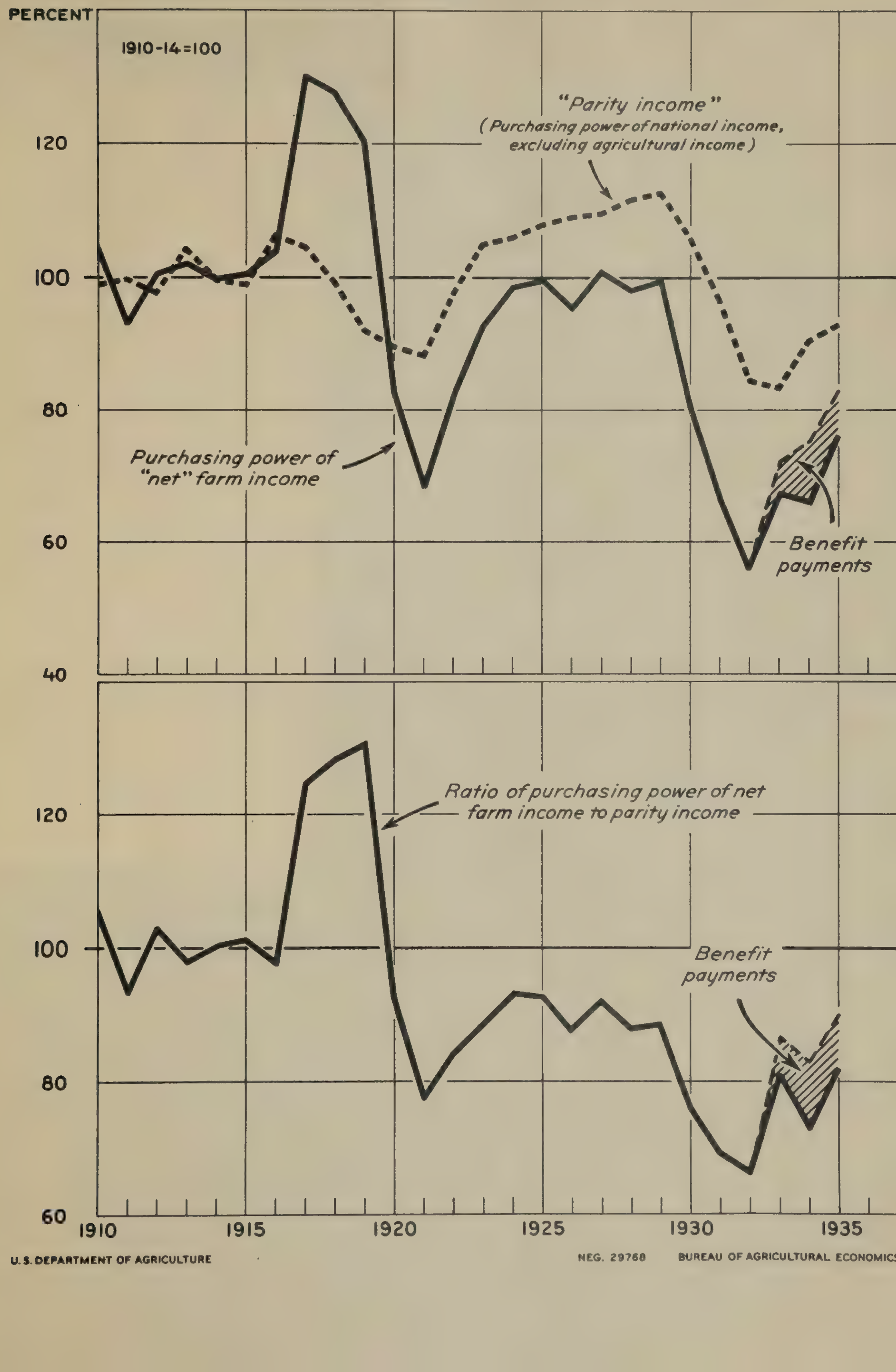
PER CAPITA PURCHASING POWER OF FARM AND NONFARM INCOME, 1910-35



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